

REMARKS

Claims 1, 3, 5 to 11, 13, 15 to 17 and 19 to 22 are pending in the present application. Claims 1, 8 to 11, 13, 17, 19 to 22 have been amended in an effort to clarify the present invention. Claims 2, 4, 12 and 14 have been canceled by this Amendment without prejudice and claim 18 was previously canceled.

Reconsideration of the Examiner's decisions and reexamination of this application are respectfully requested.

The claim objections:

I. The Examiner objected to claims 1, 8 to 11, 13, 17, 19, 20 and 22 because of various informalities.

Because of Applicants' desire to further the prosecution of the present application and in an effort to further clarify Applicants' invention, the suggestions of the Examiner have been accepted except as follows:

With respect to claims 17 and 19, the Examiner objected to the use of "computer readable program code means" and "computer usable medium". Applicants respectfully traverse these objections. The foregoing language in claims 17 and 19 is so called "Beauregard claim" language which has been previously approved by the Office starting from the Beauregard patent, USPN 5,710,578. Accordingly, reconsideration of these objections is specifically requested.

II. The Examiner objected to claims 2, 4, 12, 14 and 21 as being of improper dependent form for failing to limit the subject matter of a previous claim.

Claims 2, 4, 12 and 14 have been canceled. Subject matter in claim 21 that does not further limit the subject matter of claim 1 has been deleted.

The §112 rejections:

Claims 1 to 17 and 19 to 22 have been rejected under 35 USC §112, second paragraph, as being indefinite.

Regarding claim 1, claim 1 has been amended to indicate that the control block comprises a payload portion, etc.

Regarding claim 10, claim 10 has been amended to make the language of “host processing system” consistent and to indicate that the “apparatus” (which includes the host processing system, data communications interface and data communication network) forming a data processing system.

Regarding claim 11, the “said controller” language has been deleted. Regarding the “in response to the preset condition being met”, this would pertain to the situation, for example, where there are a plurality of indications (of events) stored in the buffer, then a control data block is generated by the controller. The control data block is the ICB 1680 shown in Figure 17 of Applicants’ drawings. It is not clear why the Examiner is unclear about this language since the Examiner did not object to or reject the apparatus form of this language in claim 1. Further regarding claim 11, claim 11 has been amended to indicate that the control block comprises a payload portion, etc.

Regarding claim 17, the same remarks made above with respect to claim 1 apply equally here.

Regarding claims 19 and 20, the same remarks made above with respect to claim 11 apply equally here.

Regarding claim 22, the same remarks made above with respect to claim 10 apply equally here.

In view of the above remarks, it is submitted that the rejection of claims 1 to 17 and 19 to 22 under 35 USC §112, second paragraph, have been overcome.

The §103 rejections:

A. Claims 1 to 5, 7 to 10, 11 to 17, and 19 to 20 have been rejected by the Examiner under 35 USC §103(a) as being unpatentable over Andrews et al. U.S. Patent 5,968,158 (hereafter “Andrews”) in view of Mori et al. U.S. Patent 5,715,452 (hereafter “Mori”).

Regarding the rejection of claims 1 to 5, 7 to 10, 11 to 17 and 19 to 20, it is submitted that the Examiner has failed to state a *prima facie* case of obviousness.

I. Regarding claim 1, there are several important differences between Applicants’ claim 1 and the Andrews reference. First, Applicants’ claim 1 recites “a buffer for storing indications of events generated by a peripheral device” [emphasis added] and “said apparatus for transferring indications of events from the peripheral device to a host computer system” [emphasis added]. According to the Examiner’s rationale, the buffer (data store 68) in Figure 5 of Andrews stores indications of events from the peripheral device (communications adapter 10) in Figure 1 of Andrews. The difficulty with the Examiner’s argument is that the data store 68 is the communications adapter 10 as can be seen by reviewing Figures 1, 2, 4, and 5 of Andrews. It is submitted that since the data store 68 and communications adapter 10 are the same device, there is no peripheral device for the buffer (data store 68) to store indications of events from. Accordingly, Andrews cannot meet the limitations recited in claim 1 of “a buffer for storing indications of events generated by a peripheral device” [emphasis added] and “said apparatus for transferring indications of events from the peripheral device to a host computer system” [emphasis added].

Secondly, Applicants’ claim 1 recites “said controller for...generating a control data block from the indications of events stored in the buffer”. The Examiner argues that the controller (DSP 64) generates a control data block (a DMA data block) from the indications of events stored in the buffer. Applicants respectfully disagree. Apparently, a control block of data is sent by the DSPs (12) to the data memory 89 of the controller card 4 by means of a DMA process. (Andrews col. 10, ll 1-5). A linked list of interrupt blocks is formed in the buffer (data store 68). However, there does not then appear to be the critical step of “generating a control data block from....the buffer” [emphasis added] as required by Applicants’ claim 1. In Andrews, the

control data block is generated before it gets to the buffer (data store 68) and not “generating from...the buffer” [emphasis added] as required by Applicants’ claim 1.

Further Applicants’ claim 1 recites “generating a control data block...comprising a payload portion having a plurality of fields each corresponding to an LCP channel...and sending the control data block to the host computer system via an LCP channel”. Andrews does not disclose or teach the LCP architecture. Nor does Andrews teach the field corresponding to the LCP channel. The Examiner references Andrews as teaching LCP channels. Andrews, however, teaches ISDN channels which is appropriate since Andrews is for an ISDN server application. ISDN channels are not LCP channels.

Mori does not supply the deficiencies of Andrews. Mori merely discloses transferring blocks of data but does not otherwise teach the features discussed above.

The Examiner cited but did not apply McAlpine U.S. Patent 6,070,219. McAlpine does not appear to be relevant to Applicants’ claim 1.

In view of the preceding remarks, it is submitted that the combination of Andrews and Mori cannot render obvious Applicants’ claim 1.

II. Inasmuch as claims 3 and 5 to 10 depend from claim 1, and since claim 1 is believed to be patentable, then claims 3 and 5 to 10 should be patentable as well. In addition, claim 10 is believed to be independently patentable. In particular, the Examiner stated with respect to claim 1 that the communications adapter 10 in Figure 1 is a peripheral device. It is believed that this position was erroneous with respect to claim 1. But given the Examiner’s position, how can the Examiner state that the communications adapter 10 which before was a peripheral device is now a part of the host processing system in claim 10? This is inconsistent reasoning.

III. Regarding claim 11, this claim is a method variation of the apparatus of claim 1. Claim 11 is believed to be allowable for the same reasons advanced in favor of claim 1. In particular, the combination of Andrews and Mori do not disclose or teach:

“transferring indication events generated by a peripheral device to a host computer system” as recited in claim 11 because Andrews only discloses interrupts within the communications device and does not disclose transferring interrupts between a peripheral device to a host computer system and Mori only discloses transferring blocks of data at high speed;

“storing indications of events generated by said peripheral device in a buffer” as recited in claim 11 because Andrews teaches storing of interrupts generated within the communications device and not generated by a peripheral and Mori only discloses transferring blocks of data at high speed;

“generating a control data block from the indications of events stored in the buffer” as recited in claim 11 because Andrews apparently does not generate a control data block from the buffer (data store 68) and Mori only discloses transferring blocks of data at high speed; and

“sending the control data block to the host computer system via an LCP channel” as recited in claim 11 because neither Andrews nor Mori teach transferring data via an LCP channel.

IV. Inasmuch as claims 13, 15 and 16 depend from claim 11, and since claim 11 is believed to be patentable, then claims 13, 15 and 16 should be patentable as well.

V. Regarding claim 17, claim 17 is a computer program product similar to apparatus claim 1 and should be allowed for the same reasons.

VI. Regarding claim 19, claim 19 is an article of manufacture claim having limitations similar to claim 11 and should be allowed for the same reasons.

VII. Regarding claim 20, claim 20 is a program storage device readable by a machine embodying the method steps of claim 11 and should be allowed for the same reasons.

B. Claims 6, 21 and 22 have been rejected by the Examiner under 35 USC 103(a) as being unpatentable over Andrews in view of Mori and further in view of Yu U.S. Patent 6,765,685.

Inasmuch as claims 6, 21 and 22 depend from claim 1, and since claim 1 is believed to be allowable, then claims 6, 21 and 22 should be allowable. In addition, claim 22 should be independently patentable for the same reasons advanced in favor of claim 10. In particular, the Examiner stated with respect to claim 1 that the communications adapter 10 in Figure 1 is a peripheral device. It is believed that this position was erroneous with respect to claim 1. But given the Examiner's position, how can the Examiner state that the communications adapter 10 which before was a peripheral device is now a part of the host processing system in claim 22? This is inconsistent reasoning.

Summary:

In view of all of the preceding remarks, it is submitted that all of claims 1, 3, 5 to 11, 13, 15 to 17 and 19 to 22 are in condition for allowance. If the Examiner finds this application deficient in any respect, the Examiner is invited to telephone the undersigned at the Examiner's earliest convenience to resolve such deficiency.

Respectfully submitted,

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